REMARKS

This Amendment is responsive to the Office Action mailed on December 22, 2006. Claims 1, 9-11, 13-16, 25-29, 35, and 36 are amended. Claims 1-36 are pending.

Claims 1-36 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lawton (DE 3219260).

Applicants respectfully traverse these rejections in view of the following comments.

Discussion of Amended Claims

The claims are amended herein for clarity and to improve readability. No new subject matter has been added by the amendments to the claims.

Discussion of Lawton

An English language translation of pages 9, 10, and part of page 11 (through the third paragraph) of Lawton are attached.

Lawton discloses surgical scissors with a basic body 11 having a handle 16. This basic body 11 can be combined by means of a hole 17 with a second, similar, scissor part (not shown). In the tip area 13 of the basic body 11, a recess 18 is provided in the course of the method of Lawton that is located in the area of the later scissor part 12' (Figure 2). This recess 18 is provided during the forging of the soft and untreated steel when forming the basic body 11. A welding bead 12 is then applied to the tip area 13 in the longitudinal direction of the scissors part such that it completely fills the recess 18 and protrudes slightly beyond it on all sides. After the application of the welding bead 12, the basic body 11 including the applied welding bead 12 is subject to a hardening operation at around 1100°C with subsequent quenching. This hardening process does not alter the characteristics of the welding bead 12. However, this process does harden the basic body 11 which is made of stainless steel such that the basic body 11 retains an elasticity sufficient to prevent fracturing but does not distort under the strain of cutting. After the hardening operation, the welding bead 12 and the tip area 13 of the basic body 11 are ground into

their final shape with a cutting edge being formed during this grinding (See attached English language translation of Lawton and Figures 1 and 2).

In contrast to Lawton, with Applicants' claimed invention, a metal foil is used as the cutting edge. The metal foil claimed by Applicant is joined to an inner surface of the cutting end of at least one of the branches. This foil is a thin foil, having a thickness between 0.05 and 0.4 mm. With the metal foil of Applicants' claimed invention, it is thus possible to use scissors of different materials (e.g., different metals or plastics) and to simply attach the foil to the branch or branches of the scissors that forms the cutting edge (see, e.g., Applicants' specification, page 6, first paragraph). Further, with Applicants' claimed invention, due to the thinness of the foil used, no grinding or sharpening is required to obtain the cutting edge (see, e.g., Applicants' specification, paragraph bridging pages 1 and 2).

The Examiner acknowledges that Lawton "fails to describe the metal member as a "foil" (Office Action, page 2). However, the Examiner indicates that "it would have been obvious that it is a foil as it is very thin" (Office Action, page 2).

Applicant respectfully disagrees with the Examiner's assertions. As discussed above, the "metal member 12" of Lawton relied on by the Examiner is actually a molten welding bead 12 applied to the basic body 11, which is then subject to hardening and grinding to produce the cutting edge. Lawton does not disclose or remotely suggest the use of a metal foil as a cutting edge, as claimed by Applicants.

In addition, the Examiner has not provided any prior art that discloses or suggests the use of a thin metal foil as a cutting edge, as is claimed by Applicants.

Applicants respectfully submit that it would not have been obvious to one skilled in the art at the time the present invention was made to modify Lawton by using a metal foil in place of the welding bead 12 disclosed in Lawton. The scissors of Lawton are produced by an entirely different process than that used to produce the scissors of the present invention. Lawton involves filling the recess 18 with molten metal in the form of a welding bead 12, hardening the entire basic body 11 and welding bead 12, and then grinding down the basic body 11 and welding bead 12 in the area of the tip 13. This process of Lawton results in a scissor part in which the basic

body 11 and welding bead form an integrated part. In contrast, with Applicants' claimed invention, the metal foil is joined to the cutting section of the branch, and does not form an integral part therewith as does the welding bead 12 of Lawton. Further, with Applicants' claimed metal foil, no grinding is required to achieve a cutting edge, due to the 0.05 to 0.4 mm thickness of the metal foil.

Further, the welding bead 12 of Lawton is approximately 5 mm thick (see, e.g., Lawton (German document) at claim 2 and page 10, end of first para.). It would not have been obvious to one skilled in the art to substitute a thin metal foil which is only between approximately 0.05 and 0.4 mm for the 5mm thick welding bead of Lawton.

It summary, it would not have been obvious to one skilled in the art to replace the thick welding bead 12 of Lawton, which requires hardening once in place on the basic body and subsequent grinding of both the welding bead 12 and basic body 11 to produce a cutting edge, with a very thin foil that does not require grinding or sharpening to produce a cutting edge. To do so would require more than mere substitution of a foil for the welding bead as apparently assumed by the Examiner. In order to make such a substitution work, one skilled in the art would have had to engage in undue experimentation.

Further, there is no motivation or suggestion in Lawton to replace the welding bead with a thin foil and to modify the basic body 11 of Lawton to accommodate such a thin foil. In fact, Lawton teaches away from the present invention by stressing the importance of the homogeneous connection between the material of the welding bead 12 and the material of the basic body 11, which according to Lawton prevents hairline cracks inside the welding bead 12 or on the interface surface during the hardening and quenching operations (Attached English language translation of Lawton, page 1, fourth para.). Lawton also teaches away from the present invention by requiring the use of a molten welding bead applied to a soft metal basic body which is then ground down to produce a cutting edge. Only with hindsight gained impermissibly from Applicants' disclosure could one of ordinary skill in the art arrive at the conclusions reached by the Examiner.

Further, the invention of Lawton does not provide the advantages of Applicants' claimed

invention. As stated above, by using the thin foil for a cutting edge, Applicants' claimed invention can be implemented with different types of scissor branches, including plastic branches, which is not possible with the welding bead 12 of Lawton. Applying a molten welding bead to a plastic branch (basic body) would of course result in melting or deformation of the plastic branch. Further, as discussed above, by using a foil that is approximately 0.05 to 0.4 mm in thickness, no grinding or sharpening is required to produce a cutting edge, as is required in Lawton.

Applicants respectfully submit that the present invention is not anticipated by and would not have been obvious to one skilled in the art in view of Lawton, taken alone or in combination with any of the other prior art of record.

Further remarks regarding the asserted relationship between Applicants' claims and the prior art are not deemed necessary, in view of the foregoing discussion. Applicants' silence as to any of the Examiner's comments is not indicative of an acquiescence to the stated grounds of rejection.

Withdrawal of the rejections under 35 U.S.C. § 103(a) is therefore respectfully requested.

Conclusion

The Examiner is respectfully requested to reconsider this application, allow each of the pending claims and to pass this application on to an early issue. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicants' undersigned attorney.

Respectfully submitted,

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ATTORNEY DOCKET NO.: HOE-796
Date: March 19, 2007

Partial Translation of Lawton (DE 32 19 260)

According to Fig. 1, a surgical scissor part in accordance with the invention comprises a basic body 11 provided with a handle 16 and that can be combined by means of a hole 17 with a second and similar scissor part, not shown, to form surgical scissors.

In the tip area 13 of the basic body 11, a recess 18 is provided in the course of the method in accordance with the invention that is located in the area of the later scissor part 12' (Fig. 2). The recess is expediently already provided during forging of the soft and untreated basic body 11.

Then, in accordance with Fig. 1, a welding bead 12 is applied to the tip area 13 in the longitudinal direction of the scissor part such that it completely fills the recess 18 and protrudes slightly beyond it on all sides. In accordance with the invention, the welding bead comprises a carbide alloy, in particular stellite, which can be readily welded. The stellite is applied in the form of a welding wire to the as yet unhardened blank, where the method used is preferably gas-shielded arc welding. It is important that the welding bead 12 is applied to the tip area 13 in a single operation and in the full thickness necessary. The thickness of the welding bead is in the area of 5 mm.

After application of the welding bead 12, the basic body 11 including the applied welding bead 12 is then subjected to a hardening operation at around 1100℃ with subsequent quenching. This does not substantially alter the properties of the material of the welding bead 12, however the basic body 11 made of stainless steel is hardened such that it retains an elasticity sufficient to prevent fracturing, but cannot distort under heavy strain during cutting. Thanks to the homogeneous connection between the material of the welding bead 12 and the material of the basic body 11, hairline cracks inside the welding bead 12 or on the interface surface during the hardening operation and in particular during quenching are effectively prevented. This is also assisted by the specific cylindrical shape of the applied welding bead, which effectively prevents the occurrence of high tension peaks during quenching.

After the hardening operation, the welding bead 12 and the tip area 13 of the basic body 11 are ground into their final shape, with the cutting edge 15 also being formed in

accordance with Fig. 2. The edge 15 is now on the surface of a stressed area 12' comprising stellite and is separated by a wavy and irregular interface surface 14 from the material of the basic body 11. The welding operation is preferably performed such that the interface surface 14 has an irregular course, as shown for example in Fig. 2.

The scissor part is now completed and can be connected to a similar scissor part by combining them and inserting a screw into the hole 17.